

## CLAIMS

What is claimed is:

1. A communications system for providing a communications link between a ground station and a mobile platform via a satellite, comprising:
  - a parent proxy server connected to a ground station;
  - a child proxy server located on a mobile platform;wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said mobile platform and said ground station.
2. The communications system of claim 1 further comprising:
  - a user communication device (UCD) located on said mobile platform and connected to said child proxy server.
3. The communications system of claim 2 further comprising:
  - a router that is located on said mobile platform and that is connected to said child proxy server.
4. The communications system of claim 3 further comprising:
  - a web cache service that is located on said mobile platform and that is connected to said child proxy server.

5. The communications system of claim 4 wherein said web cache service stores web pages in cache.

6. The communications system of claim 5 wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages.

7. A communications system for providing a communications link between a distributed communications system and a mobile platform via a satellite, comprising:

- a ground station;
  - a parent proxy server connected to said ground station;
  - a distributed communications system connected to said parent proxy server;
  - a satellite that communicates with said ground station;
  - a transceiver located on a mobile platform that communicates with said satellite;
  - a router connected to said transceiver;
  - a child proxy server connected to said router; and
  - a user communication device (UCD) connected to said child proxy server,
- wherein said child and parent proxy servers establish a persistent transmission

control protocol (TCP) link between said mobile platform and said ground station.

8. The communications system of claim 7 wherein said UCD connects to said child proxy server using a first group of TCP settings.

9. The communications system of claim 8 wherein said parent and child proxy servers communicate using a second group of TCP settings.

10. The communications system of claim 7 further comprising:  
a web cache service that is located on said mobile platform and that is connected to said child proxy server.

11. The communications system of claim 10 wherein said web cache service stores web pages.

12. The communications system of claim 11 wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages.

13. The communications system of claim 12 wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages.

13. A method for providing a communications link between a ground station and a mobile platform via a satellite, comprising the steps of:

connecting a parent proxy server to a ground station;

providing a child proxy server on a mobile platform; and

establishing a persistent transmission control protocol (TCP) link using said child and parent proxy servers between said mobile platform and said ground station.

14. The method of claim 13 further comprising the steps of:

connecting a user communication device (UCD) located on said mobile platform to said child proxy server.

15. The method of claim 14 further comprising the steps of:

connecting a router that is located on said mobile platform to said child proxy server.

16. The method of claim 15 further comprising the steps of:

connecting a web cache service that is located on said mobile platform to said child proxy server.

17. The method of claim 16 wherein said web cache service stores web pages.

18. The method of claim 17 wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages.

19. The method of claim 13 wherein said UCD connects to said child proxy server using a first group of TCP settings and wherein said child and parent proxy servers communicate using a second group of TCP settings to optimize said persistent link.

Boeing ref: 00-446 (008650)

20. A method for providing a communications link for mobile platforms via a satellite, comprising the steps of:

connecting a parent proxy server to a ground station;

providing a transceiver on a mobile platform;

connecting a child proxy server to said transceiver;

establishing a communications link between said transceiver and said ground station via a satellite; and

setting transmission control protocol (TCP) parameters of said communications link between said child and parent proxy servers for satellite links.

21. The method of claim 20 further comprising the step of:

connecting a distributed communications system to said parent proxy server;

22. The method of claim 20 further comprising the step of:

connecting a user communication device (UCD) to said child proxy server.

23. The method of claim 23 wherein said UCD connects to said child proxy server using a first group of TCP settings and wherein said child and parent proxy servers communicate using a second group of TCP settings.